

# AGREEMENT ON THE CONSERVATION OF BATS IN EUROPE

## *Report on implementation of the Agreement in Portugal*

### - 1998 -

#### A. General Information

- ♦ *Name of Party:* Portugal
- ♦ *Date of Report:* 1 March 1998
- ♦ *Period Covered:* January 1996 until February 1998
- ♦ *Competent Authority:* Instituto da Conservação da Natureza

#### B. Status of Bats Within the Territory of the Party

##### 1. Summary details of Resident Species

24 species are known in Continental Portugal (Table 1). The presence of *Pipistrellus nathusii* in the continent was reported in 1910, but there are no recent reports for this species. *Myotis mystacinus* does not have any status in this table, because when the Portuguese Red Data Book was prepared its presence in the country was still not confirmed. However, in 1994 we found one breeding colony in the North of Portugal.

##### 2. Status and Trends

Table 1 shows the status and the apparent population trends of the species known in Continental Portugal.

Table 1 - Status and apparent population trends of the species known in Continental Portugal. Data published in the Portuguese Red Data Book (1990).

Species	Status	Apparent Trend
<i>Rhinolophus ferrumequinum</i>	endangered	declining
<i>R. hipposideros</i>	endangered	declining
<i>R. euryale</i>	endangered	declining
<i>R. mehelyi</i>	endangered	declining
<i>Myotis mystacinus</i>	?	
<i>M. emarginatus</i>	endangered	probably declining
<i>M. nattereri</i>	endangered	declining
<i>M. bechsteinii</i>	endangered	probably declining
<i>M. myotis</i>	endangered	declining
<i>M. blythii</i>	endangered	declining
<i>M. daubentonii</i>	not threatened	
<i>Pipistrellus pipistrellus</i>	not threatened	
<i>P. nathusii</i>	?	
<i>P. kuhli</i>	not threatened	

<i>Hypsugo savii</i>	insufficiently known	unknown
<i>Nyctalus leisleri</i>	vulnerable	unknown
<i>N. noctula</i>	indeterminate	unknown
<i>N. lasiopterus</i>	indeterminate	unknown
<i>Eptesicus serotinus</i>	not threatened	
<i>Barbastella barbastella</i>	indeterminate	unknown
<i>Plecotus auritus</i>	indeterminate	unknown
<i>P. austriacus</i>	not threatened	
<i>Miniopterus schreibersii</i>	vulnerable	declining
<i>Tadarida teniotis</i>	rare	unknown

### 3. Habitats and Roost Sites

In Portugal there are many habitats that can be used by bats. We have extensive limestone zones, with many caves, that are used by cave-dwelling species both in the winter and during the breeding season. In the last decades, with the declining of the mining activities, new potential roosts became available and are now occupied.

### 4. Threats

The major threats that occur in Portugal are:

- Disturbance

In the last years there has been an increase in the number of people involved in outdoor activities, including caving, and we often find signs of the recent presence of visitors inside the caves. The disturbance is particularly bad during the hibernation and breeding seasons. In some caves we even found signs of fires and shotgun cartridges.

- Roost destruction

Shepherds often blocked the entrance of vertical caves to keep their animals from falling in them. There are no data on the numbers of holes closed for this reason, but the practice does not seem to continue. In accordance with Portuguese law the entrances of inactive mine galleries are often closed with walls, but mines abandoned a long time ago have open entrances. Efforts are being made to avoid the blocking of the entrances of the galleries used by bats, by the mining authorities.

- Loss of feeding areas

Portugal's landscape is changing, due to the integration in EU. The traditional land use practices (low intensity grazing, large areas of holm oak "montados", and little

use of pesticides) were overall, better for the bats. The newest CAP encourages a declining in pesticides use, so it may have halted this negative trend (but there are no data on this issue).

Clearing of riparian vegetation is still a common practice.

- Pesticides

Some forbidden pesticides are still in use, with obvious consequences for bats (see also point 13).

#### *5. Data Collection*

Data are collected by Instituto da Conservação da Natureza and Faculdade de Ciências de Lisboa.

There are some datasets prepared by "Instituto da Conservação da Natureza" and "Faculdade de Ciências de Lisboa": (a) Bat observations (based on bibliography, information and field work), (b) Roosts monitoring programme, and (c) Banding (captures and recaptures).

### **C. Measures Taken to Implement Article III of the Agreement**

#### *6. Legal measures taken to prevent the deliberate capture, keeping or killing bats, including details of enforcement actions used to support such measures*

All bat species are protected in Portugal by Portuguese law since 1967. But there is no specific legislation directed to the protection of caves, except Bern Convention (Decreto-lei nº 316/89) Portugal is also bound by the provisions the Habitats directive (Decreto-lei nº 226/97). The Instituto da Conservação da Natureza is preparing legislation to protect caves and mines that harbour important bat populations; we hope that this legislation will be ready in the next 2 years.

#### *7. Sites identified and protected which are important to the conservation of bats*

The survey of the underground roosts is already quite complete.

The roosts of the remaining species are still poorly known, although there has been an effort to locate important roosts of non cave-dwelling bats in protected areas (see point 12).

Portugal already presented several sites to be included in Portuguese list of Sites of Community Interest, and is now selecting some more sites. Of the 20 important

underground sites, 5 were included in the first phase, and we hope that 13 will be now included. We hope that these areas will be included in Natura 2000.

#### *8. Consideration given to habitats which are important to bats*

Research about feeding habitat use by bats in Portugal has been going on, using radio-tracking (see point 12). There are already some data for *Myotis myotis* and *Rhinolophus mehelyi*, but we still need to get more data.

Nowhere in Portugal is the landscape managed specifically to protect bat feeding habitats. However, since some of the main roosts known are inside natural parks it is hoped that the general rules to protect the landscapes in these areas will, in general, also benefit bats.

#### *9. Activities carried out to promote the awareness of the importance of the conservation of bats*

We prepared some educational materials (leaflet, poster, and stickers) to increase awareness of bat issues. We wrote several papers in environmental magazines. Talks have been given in meetings of spelunkers and in schools.

#### *10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management*

Although the Instituto da Conservação da Natureza had already tried that the Government prepare legislation about this, this point has not been implemented yet.

#### *11. Additional action undertaken to safeguard populations of bats*

See points 12 and 13.

#### *12. Recent ongoing programmes (including research) relating to the conservation and management of bats*

There are several programmes:

- Survey of roosts of cave-dwelling and non cave-dwelling bat species (see point 7).
- Some of the most important underground roosts in Portugal are very accessible to people. Since disturbance may be very damaging to the bat populations, we are evaluating the amount of disturbance of these roosts using dataloggers that record the number of visits.

- We carried out a study about the influence of the gates on the behaviour of various bat species. The conclusion was that in certain circumstances the gates may actually be very harmful to some colonies. So, we decided to use fences to keep visitors out of bat roosts, and now we already fenced 4 underground roosts.
- In one underground roost there was problems with stones that sometimes blocked the narrow passage that the bats used. We built a device to prevent stones to block that passage.
- There has been an effort to cut the vegetation in the entrances of some roosts, which sometimes become blocked.
- A monitoring programme of the cave-dwelling species is in progress since 1987. This programme involve the estimation of bat numbers present in the most important wintering and parturition roosts. The surveys are carried out annually in most of the roosts.
- There was an artificial roost that harboured 300 bats of 5 species that was destroyed by a dam. A new artificial roost was built, and it was already occupied by 200 of bats of the same species.
- Since most of the endangered bat species of our fauna are cave bats and these are concentrated in a relatively small number of roosts, we are carrying out a study aimed at the identification of the most important feeding areas around these roosts. This is being done using radio-tracking and transects with bat detectors (see point 8).
- A project on several aspects of population biology of *Myotis myotis* is also being carried out (see Section D). The aim of the project is to compare the stress periods in Portugal and Germany, and to analyse if there is a difference in the social structure in the populations in South and Central Europe.
- Natural parks are the areas where land use practices are more closely monitored and where there are better chances of doing habitat management to improve the quality of habitats for bats. Therefore, in some of these protected areas, a study is being carried out to identify the habitats that are most used by bats during their feeding flights (see point 7). The data are being collected with bat detectors, along transects that include the most important habitats of each park. Nine protected areas are already studied, and the others will be studied in the next years.
- Study of the amounts of pesticides accumulated in the guano of the most important roosts (see point 13).

13. *Consideration being given to the potential effects of pesticides on bats, and efforts to replace timber treatment chemicals which are highly toxic to bats*

In 1993 there was found a colony of *Miniopterus schreibersii* which had lost most, if not all, the young of the year due to pesticide poisoning. So, we started a project aimed at evaluating the overall impact of pesticides in the bat populations. To do this, bats found dead are being analysed to measure the amount of various pesticides accumulated in the carcasses. A comparative study of the amounts of pesticides accumulated in the guano of the most important roosts is also being carried out.

#### **D. Functioning of the Agreement**

##### *Cooperation with other Range States*

There is a project between Portugal (Instituto da Conservação da Natureza and University of Lisbon) and Germany (University of Munich): "Conservation relevant aspects of population biology of *Myotis myotis*. A comparison between South and Central Europe" (see point 12).